WHAT IS CLAIMED IS:

1. An emergent power supply system comprising:

an inlet coupled to an input power source;

a multiplicity of backup power supply modules coupled to the inlet for generating a backup power; and

an outlet coupled to the multiplicity of backup power supply modules for providing the backup power to a load;

wherein each of the multiplicity of backup power supply modules comprises an input current balancer for collecting an operation status information associated with the multiplicity of backup power supply modules, and equalizing the input currents of the multiplicity of backup power supply modules with each other based on an average of the operation status information.

2. The emergent power supply system of claim 1 wherein each of the multiplicity of backup power supply modules includes:

a controller for monitoring the operation status information of the multiplicity of backup power supply modules; and

a communication interface for transmitting the operation status information of the multiplicity of backup power supply modules.

3. The emergent power supply system of claim 2 wherein the input current balancer comprises:

an average input current generator which receives the input currents of the multiplicity of backup power supply modules from the communication interface and generates an average input current

by dividing a sum of the input currents by a number of the multiplicity of backup power supply modules;

an adder-subtractor coupled to the average input current generator for comparing the average input current with an input current associated with a backup power supply module thereof and in response thereto generating a differential input current; and

a magnitude amplifier coupled to the adder-subtractor for amplifying the differential input current in accordance with a predetermined proportion.

4. The emergent power supply system of claim 3 wherein the magnitude amplifier is implemented by a PID (proportional-integral and derivative) controller.

5. The emergent power supply system of claim 3 wherein each of the multiplicity of the backup power supply modules includes a rectifier for converting an AC power into a DC power having a predetermined voltage level, and wherein the rectifier includes an output voltage stabilizer for receiving an amplified differential input current from the magnitude amplifier and in response thereto generating a rectifying control signal to control the on/off operations of the rectifier.

6. The emergent power supply system of claim 2 wherein the input current balancer comprises:

an average input power generator which receives the input powers of the multiplicity of backup power supply modules from the communication interface and generates an average input power by dividing a sum of the input powers by a number of the multiplicity of backup power supply modules;

an adder-subtractor coupled to the average input power generator for comparing the average input power with an input power associated with a backup power supply module thereof and in response thereto generating a differential input power; and

a magnitude amplifier coupled to the adder-subtractor for amplifying the differential input power in accordance with a predetermined proportion.

7. The emergent power supply system of claim 4 wherein the magnitude amplifier is implemented by a PID (proportional-integral and derivative) controller.

8. The emergent power supply system of claim 5 wherein each of the multiplicity of the backup power supply modules includes a rectifier for converting an AC power into a DC power having a predetermined voltage level, and wherein the rectifier includes an output voltage stabilizer for receiving an amplified differential input power from the magnitude amplifier and in response thereto generating a rectifying control signal to control the on/off operations of the rectifier.

9. The emergent power supply system of claim 1 wherein the emergent power supply system is operating in accordance with a parallel redundant operation or a hot swappable operation.

10. A method of balancing input currents among a multiplicity of backup power supply modules in an emergent power supply system, comprising the steps of:

collecting an operation status information of the multiplicity of backup power supply modules;

generating an average of the operation status information;

generating a differential value by comparing the average of the operation status information with an operation status information associated with one of the multiplicity of backup power supply modules;

amplifying the differential value in accordance with a predetermined proportion; and

generating a rectifying control signal in accordance with an amplified differential value to control the on/off operations of a power conversion apparatus within the multiplicity of backup power supply modules.

11. The method of balancing input currents according to claim 10 wherein the operation status information comprises the input currents or the input powers of the multiplicity of backup power supply modules.

12. The method of balancing input currents according to claim 10 wherein the step of generating a differential value is performed by an adder-subtractor.

13. The method of balancing input currents according to claim 10 wherein the step of the differential value in accordance with a predetermined proportion is performed by a PID (proportional-integral and derivative) controller.

14. The method of balancing input currents according to claim 10 wherein the power conversion apparatus comprises a rectifier.

15. The method of balancing input currents according to claim 10 wherein the multiplicity of backup power supply modules are operating in accordance with a parallel redundant operation or a hot swappable operation.